

### REMARKS

Claims 1-30, 32-34, 36-44, 49-51 and 53-58 are pending.

### CLAIM REJECTIONS

#### *Rejection of claims under 35 U.S.C. § 112, first paragraph*

The Examiner has rejected claims 1, 3-15, 27-30, 32-34, 36-44, 49-51 and 53-58 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. See Office Action at p. 2. Claims 1, 27, 42, 53 and 54 are independent.

Claims 1, 27, 42, 53 and 54 were previously amended to recite the phrase "the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater." The specification on p.5, line 18-20 and Figure 1 describes that "[t]he placement, shape and length of the web slots **103** in a region having dimension **a1** determine the width and length of the web elements **102** as well as the shape and size of the web voids." The specification further describes that "[w]eb area dimension **a1** in the region increases during the manufacturing process by expanding the slots to become significantly wider until the web area reaches the final dimension **a2** is shown on FIG. 1a." See p. 5, lines 28-30 of the specification and Figures 1 and 1a. Such an expansion "can extend a dimension by a factor of 10% to 300%, 20% to 250%, or 50% to 100%." See p. 6, lines 25-26. It follows that a skilled person reading the specification as a whole would have immediately realized (without exercise of inventive skill) that the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion can be 1:8 or greater. Accordingly, the specification sufficiently describes the claimed invention in full, clear, concise and exact terms. Applicants respectfully request reconsideration and withdrawal of this rejection.

#### *Rejection of claims under 35. U.S.C. §103*

The Examiner has maintained the rejection of claims 1, 3-15, 17-30, 32-51 and 53-59 under 35 U.S.C. §103(a) as being unpatentable over German Patent No. 3,336,378 to Knauf ("Knauf") in view of U.S. Patent No. 5,605,024 to Sucato et al. ("Sucato"), U.S. Patent No.

5,913,788 to Herren ("Herren"), and U.S. Patent No. 5,527,625 to Bodnar ("Bodnar"). See Office Action at pages 4-7. Claims 1, 27, 42, 53 and 54 are independent.

**Claims 1, 27 and 42**

Applicant has discovered a metal framing including a web region including a plurality of reinforcements proximate to the web slots and confined to the web elements and exclusive to the web voids, each expanded web slot has a length to width ratio of about 2:1 or greater, and the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater. See claims 1, 27, and 42.

Fig. 1 of Knauf shows a framing member having a much smaller ratio of web element width to unexpanded framing member width. Knauf does not teach or suggest a framing member in which the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater. This defect is not remedied in Sucato, Herren, or Bodnar either. Sucato discloses "a pair of U-shaped members 62 and 63 which may be formed of a metallic material that are interconnected by bight 64 comprising an expandable mesh 65" (col. 4, lines 22-25), and shows a framing member having a much smaller ratio of web element width to unexpanded framing member width than recited in claim 1 herein. See Figs. 20-21 of Sucato. Herren and Bodnar also fail to teach the claimed ratio of the distance between unexpanded slots to the unexpanded dimension of the framing member. There is no motivation or suggestion within the references to combine Knauf with Sucato, Herren, or Bodnar. The references, alone and in combination, fail to teach the claimed ratio of web element width to unexpanded framing member width.

Additionally, the cited references fail to teach a plurality of reinforcements proximate to the web slots and confined to the web elements and exclusive to the web voids. Knauf does not disclose any reinforcements. The Examiner erroneously contends that Knauf teaches "[d]arts or dimples 66 proximate to the web slots," which applicant presumes is intended to be a description of Sucato. Knauf contains no teaching or suggestion of a plurality of reinforcements proximate to the web slots and confined to the web elements and exclusive to the web voids. The other references also do not teach or suggest a plurality of reinforcements proximate to the web slots and confined to the web elements and exclusive to the web voids. As described in Sucato, "FIG.

22 is a cross sectional view of FIG. 21 with a crease line or indentation 66 added to neck 65 to strengthen the mesh when the stud is in its expanded position." See column 4, lines 31-33 of Sucato (emphasis added). The crease line or indentation described in Sucato is not a reinforcement proximate to an expanded web slot. Example of a reinforcement proximate to an expanded web slot, which are next to the expanded web slots, are shown in Figs. 3 of Applicant's specification. As shown below in the reproduction of Fig. 22 of Sucato, crease line or indentation 66 extends across and through the expandable mesh 65, including the voids. See column 4, lines 22-25 and lines 31-33. Thus, the crease line or indentation is not proximate to an expanded web slot and confined to the web elements and exclusive to the web voids. There is no teaching or suggestion in Sucato of any structural feature proximate to an expanded web slot.



Sucato Fig. 22

There is no teaching or suggestion in Sucato of any structure other than a crease or indentation across the width of an expandable web. In addition, the web in Sucato has voids that have a length to width ratio of approximately 1:1. Sucato does not describe or suggest each expanded web slot has a length to width ratio of 2:1 or greater. The expanded web slot has a length to width ratio of 2:1 or greater is necessary to achieve the structure on the web that is not available when the ratio is approximately 1:1. See Declaration of Anderson submitted with Applicant's response dated April 20, 2006. Herren does not cure these deficiencies. Although the Examiner points to element 39 of Herren as teaching a plurality of reinforcements as recited in claim 1, element 39 is actually a standoff washer, not a reinforcement. See col. 8, lines 26-44. Also, standoff washer 39 is not located in any web region. Bodnar also does not cure these deficiencies. The depressions and flanges of Bodnar are not proximate to expanded web slots

and confined to the web elements and exclusive to the web voids. Bodnar instead teaches flanges 94, 96, 98, 100, 102, and 104 that are integral, not exclusive, to the openings. See col. 6, line 61 to col. 7, line 2, Figs. 5, 6. Furthermore, Bodnar describes structures that are pierced. See column 1, line 64 of Bodnar. There is no description or suggestion in Bodnar of a plurality of expanded web slots. Bodnar also describes a metal member having corner flanges 100, 104 in the corners of generally triangular openings 92. See column 6, line 55 - column 7, line 2; FIG. 5 of Bodnar. Bodnar also describes generally three-sided depressions such as depressions 42, 44 formed in a strut portion 28 of the disclosed member. See column 6, lines 10-13; FIG. 1 of Bodnar. Bodnar does not describe or suggest a plurality of reinforcements proximate to the web slots.

Accordingly, claims 1, 27, and 42, and claims that depend therefrom are patentable over the combination of Sucato, Bodnar and Herren for at least the reasons discussed above. Applicant requests that this rejection be reconsidered and withdrawn.

#### Claim 53

The Examiner previously indicated that the subject matter of heat treating the claimed metal framing matter is patentable (see September 8, 2004 Office Action, page 3), yet maintains the rejection of claims 53 and 54, which recites heat treating a frame member after expanding the slots.

The Examiner does not suggest--and Applicant agrees--that either Knauf, Sucato, or Herren teaches heat treating expanded web slots in a formed metal sheet. The Examiner incorrectly asserts that Bodnar teaches this element, referring to column 7, line 50 - column 8, line 65. This portion of Bodnar actually discloses that the described member **can be formed from cold rolled or hot rolled steel**. See column 2, lines 41-42 of Bodnar. Bodnar does not teach or suggest expanding the slots of the web region to form expanded slots having a web element and a web void, and heat treating the member after expanding the slots. Bodnar merely describes piercing cold rolled or hot rolled steel.

Furthermore, as previously explained, none of the references teaches or suggests that the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater. As previously explained, the references alone and in

combination, fail to teach or suggest a plurality of reinforcements proximate to the web slots and confined to the web elements and exclusive to the web voids.

Additionally, as previously explained, there is no motivation or suggestion to combine the teachings of Knauf, Sucato, Herren, and Bodnar. For at least these reasons, claim 53 should be allowed. Applicant respectfully requests that this rejection be reconsidered and withdrawn.

**Claim 54**

Claim 54, which recites a metal framing member having expanded web slots that are heat treated, also stands rejected as obvious over Knauf in view of Sucato, Herren, and Bodnar. As explained above with reference to claim 53, Bodnar and the other cited references do not disclose expanded web slots that have been heat treated. As discussed above with reference to claim 53, these references also fail to teach or suggest that the ratio of the distance between adjacent slots prior to expansion to a width of the formed metal sheet prior to expansion is 1:8 or greater, or that the framing member includes a plurality of reinforcements proximate to the web slots and confined to the web elements and exclusive to the web voids.


Furthermore, as noted, the combination of these references is improper. For at least these reasons, claim 54 should be allowed. Applicant respectfully requests that this rejection be reconsidered and withdrawn.

**CONCLUSION**

For the foregoing reasons, Applicant respectfully requests reconsideration and withdrawal of the pending rejections. Applicant believes that the claims now pending are in condition for allowance. Should any further fees be required by the present Reply, the Commissioner is hereby authorized to charge Deposit Account **19-4293**.

Respectfully submitted,

Date: 3-30-07  
**Customer Number: 27890**  
**STEPTOE & JOHNSON LLP**  
1330 Connecticut Ave., NW  
Washington, DC 20036  
Tel: 202-429-3000  
Fax: 202-429-3902

  
Harold H. Fox  
Reg. No. 41,498